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EXAMINER

BELL, MELTIN

ART UNIT

PAPER NUMBER

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9

Please find below and/or attached an Office communication concerning this application or proceeding.

5

# Office Action Summary

Application No.

10/021,203

Applicant(s)

BIGUS ET AL.

Examiner

Meltin Bell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-104 is/are pending in the application.
- 4a) Of the above claim(s) 34-56, 58-92 and 94-104 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33, 57 and 93 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date Nos 3,4,6.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

This action is responsive to application **10/021,203** filed **10/30/01**

Claims 1-33, 57 and 93 have been examined.

### ***Information Disclosure Statement***

Applicant is respectfully reminded of the ongoing Duty to disclose 37 C.F.R. 1.56 all pertinent information and material pertaining to the patentability of applicant's claimed invention, by submitting in a timely manner PTO-1449, Information Disclosure Statement (IDS) with the filing of applicant's application or thereafter.

### ***Drawings***

The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the drawings.

The drawings are objected to because:

- The label on Fig. 10, item 302 is inconsistent with page 28, lines 18 and 28 as well as page 29, line 5.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Specification***

The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is required in correcting any errors of which applicant may become aware in the specification.

The disclosure is objected to because of the following informalities:

- The use of the trademarks XML and RETE have been noted in this application (specification page 24, lines 8 and 25). They should be capitalized wherever they appear and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.
- Fig. 1 suggests 'intelligent' should be inserted between 'support' and 'agent' (page 11, line 16; page 13, line 4).
- Fig. 1 suggests 'intelligent' should be inserted between 'product' and 'agent' (page 11, line 17).
- Fig. 1 suggests 'intelligent agent' should be inserted between 'support' and 'server' and between 'product' and 'servers' (page 11, line 29).
- 'cross-customer' should precede 'knowledge base' (page 13, line 2).
- ', respectively' should follow '92' (page 17, line 17).
- '18' should be added after 'server' (page 18, line 18).

Appropriate correction is required.

### ***Claim Objections***

Claim 32 is objected to because of the following informalities:

**Regarding claim 32:**

- 'at least one of a transmission medium **and** a recordable medium' would read better as  
'at least one of a transmission medium or a recordable medium'

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 18, 31, 33, 57 and 93 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The language of the claims (e.g. "intelligent agent", "operational condition") raise a question as to whether the claims are directed merely to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. For example, if claim 33 was amended to recite a computer-implemented method, it will be statutory in most cases since use of technology permits the function of the descriptive material to be realized.

***Claim Rejections - 35 USC § 102***

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-11, 13-16, 18-24, 26-29, 31 and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by *Bigus et al* U.S. Patent Number 6,192,354 (February 20, 2001 - Publication Date, March 21, 1997 - Filing Date).

**Regarding claim 1:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")
- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may... an

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agents' permutations"; column 10, lines 12-35, "Servers 65 of remote... in the alternative")

- (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first. agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary... of the client")

**Regarding claim 2:**

*Bigus et al* further teaches,

- the first and second product support agents are configured to communicate with one another (Figs. 5-6)

**Regarding claim 3:**

*Bigus et al* further teaches,

- the first product support intelligent agent is configured to execute on either the first or second agent platforms (column 10, lines 17-27, "the agent host... interacts with agent 100")

**Regarding claim 4:**

*Bigus et al* further teaches,

- the customer computer is the computer-related product (column 5, lines 6-14, "Intelligent agents are... another computer process")

**Regarding claim 5:**

*Bigus et al* further teaches,

- the computer-related product comprises at least one of an internal software component, an internal hardware component, an external software component and an external hardware component associated with the customer computer (Fig. 4; column 10, lines 60-65, "One or more...as external databases")

**Regarding claim 6:**

*Bigus et al* further teaches,

- each of the first and second product support intelligent agents is configured to perform product support operation selected from the group consisting of monitoring operational data, collecting operational data, analyzing operational data, identifying an undesirable operational condition in the customer computer, selecting another intelligent agent to remedy the undesirable operational condition, creating another intelligent agent to remedy the undesirable operational condition, performing at least one task to remedy the undesirable operational condition and combinations thereof (column 5, lines 42-53, "agents may have...networks vs. procedural logic), etc.")

**Regarding claim 7:**

*Bigus et al* further teaches,

- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first



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product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 8:**

*Bigus et al* further teaches,

- the product support program is further configured to dispatch a remedy intelligent agent to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 9:**

*Bigus et al* further teaches,

- the product support program is further configured to create the remedy intelligent agent (column 8, lines 27-36, "an agent may...perform its task")

**Regarding claim 10:**

*Bigus et al* further teaches,

- the product support program is further configured to publish the remedy intelligent agent with a distribution control that limits distribution of the remedy intelligent agent (column 11, lines 39-56, "Agent manager 32 provides...functionality of module 34")

**Regarding claim 11:**

*Bigus et al* further teaches,

- the product support program is further configured to select the remedy intelligent from among a plurality of existing remedy agents (Fig. 3; column 8, lines 52-56, "an agent 220 may...perform the task")

**Regarding claim 13:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to collect operational data from the customer computer while resident on the product support computer (Fig. 6; column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 14:**

*Bigus et al* further teaches,

- the customer computer and the product support computer are coupled to one another over the Internet (column 8, lines 66-67, "A representative hardware... the invention is illus-"; column 9, lines 1-13, "trated in FIG. 4, where a ... and public networks (e.g., the Internet)")

**Regarding claim 15:**

*Bigus et al* further teaches,

- a cross-customer knowledge base including operational data associated with a plurality of customers wherein the second product support intelligent agent is configured to analyze the operational data stored in the cross-customer knowledge base to identify an undesirable operational condition in the computer-related product (column 6, lines 6-13, "domain knowledge for... sales are low"; column 10, lines 12-22, "Server 65 of remote... and their clients")

**Regarding claim 16:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to analyze the operational data using logic selected from the group consisting of neural network logic, fuzzy logic, pattern matching logic, script logic, and combinations thereof (column 7, lines 35-44, "Agents or program...the objective criteria")

**Regarding claim 18:**

*Bigus et al* teaches,

- (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")
- (b) executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")

**Regarding claim 19:**

*Bigus et al* further teaches,

- the first and second product support agents are configured to communicate with one another when performing the first and second product support operations (Figs. 5-6)

**Regarding claim 20:**

*Bigus et al* further teaches,

- each of the first and second product support operations are selected from the group consisting of monitoring operational data, collecting operational data, analyzing operational data, identifying an undesirable operational condition in the customer computer, selecting another intelligent agent to remedy the undesirable operational condition, creating another intelligent agent to remedy the undesirable operational condition, performing at least one task to remedy the undesirable operational condition, and combinations thereof (column 5, lines 42-53, "agents may have... networks vs. procedural logic), etc.")

**Regarding claim 21:**

*Bigus et al* further teaches,

- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 22:**

*Bigus et al* further teaches,

- dispatching a remedy intelligent agent to at least one of the customer computer and the product support computer to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 23:**

*Bigus et al* further teaches,

- creating the remedy intelligent agent (column 8, lines 27-36, "an agent may... perform its task")

**Regarding claim 24:**

*Bigus et al* further teaches,

- publishing the remedy intelligent agent with a distribution control that limits distribution of the remedy intelligent agent (column 11, lines 39-56, "Agent manager 32 provides... functionality of module 34")

**Regarding claim 26:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to collect operational data from the customer computer while resident on the product support computer (Fig. 6; column 6, lines 6-13, "domain knowledge for... sales are low")

**Regarding claim 27:**

*Bigus et al* further teaches,

- the customer computer and the product support computer are coupled to one another over the Internet (column 8, lines 66-67, "A representative hardware... the invention is illus-"; column 9, lines 1-13, "trated in FIG. 4, where a ... and public networks (e.g., the Internet)")

**Regarding claim 28:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to analyze the operational data stored in the cross-customer knowledge base to identify an undesirable operational condition in the computer-related product (column 6, lines 6-13, "domain knowledge for... sales are low"; column 10, lines 12-22, "Server 65 of remote... and their clients")

**Regarding claim 29:**

*Bigus et al* further teaches,

- the second product support intelligent agent is configured to analyze the operational data using logic selected from the group consisting of neural network logic, fuzzy logic, pattern matching logic, script logic, and combinations thereof (column 7, lines 35-44, "Agents or program... the objective criteria")

**Regarding claim 31:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")
- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may... an agents' permutations"; column 10, lines 12-35, "Servers 65 of remote ... in the alternative")

- (c) a product support program configured to reside on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")
- (d) a signal bearing; medium bearing the first and second product support agents, the first agent platform, and the product support program (column 10, lines 38-45, "the various embodiments ... drives, and CD-ROM's")

**Regarding claim 32:**

*Bigus et al* further teaches,

- the signal bearing medium includes at least one of a transmission medium and a recordable medium (column 10, lines 45-46, "and transmission type media such as digital and analog communications links")

***Claim Rejections - 35 USC § 103***

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the Office presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the Office to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 12 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bigus et al* U.S. Patent Number 6,192,354 (February 20, 2001 Publication Date, March 21, 1997 Filing Date) in view of *Kopelman* "Accelerated engineering: the 3 secrets to just-in-time product development (JITPD)" (27-29 Sept. 1994).

**Regarding claim 12:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")



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- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may...an agents' permutations"; column 10, lines 12-35, "Servers 65 of remote...in the alternative")
- (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product Support program including a second agent platform, and the product Support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first. agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")
- the first product support intelligent agent is configured to collect operational data associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for...sales are low")
- the product support program is further configured to dispatch a remedy intelligent agent to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for...sales are low")

However, *Bigus et al* doesn't explicitly teach the product support program is configured to dispatch the remedy intelligent agent between product releases of the computer-related product while *Kopelman* teaches,

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- the product support program is configured to dispatch the remedy intelligent agent between product releases of the computer-related product (page 365, left column, SECRET #3 section, paragraph 1, sentence 1, "And third, the team...prototypes early on")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

- Accelerated engineering development (*Kopelman*, page 362, left column, paragraph 4, "So our companies'... Product Development (QRPD)")
- Optimizing performance (*Bigus et al*, Abstract, "The performance of... variety of situations")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Kopelman* to obtain the invention specified in claim 12, an apparatus. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop quality product releases.

**Regarding claim 25:**

*Bigus et al* teaches,

- (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client";

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Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")

- (b) executing a second product support intelligent agent on a second agent platform

resident on the product support computer to perform a second product support operation associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")

- the first product support intelligent agent is configured to collect operational data

associated with the computer-related product, and wherein the second product support intelligent agent is configured to analyze the operational data collected by the first product support intelligent agent to identify an undesirable operational condition for the computer-related product (column 6, lines 6-13, "domain knowledge for...sales are low")

- dispatching a remedy intelligent agent to at least one of the customer computer and the product support computer to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for...sales are low")

However, *Bigus et al* doesn't explicitly teach dispatching the remedy intelligent agent occurs between product releases of the computer-related product while *Kopelman* teaches,

- dispatching the remedy intelligent agent occurs between product releases of the computer-related product (page 365, left column, SECRET #3 section, paragraph 1, sentence 1, "And third, the team...prototypes early on")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Accelerated engineering development (*Kopelman*, page 362, left column, paragraph 4, "So our companies'... Product Development (QRPD)")
- Optimizing performance (*Bigus et al*, Abstract, "The performance of... variety of situations")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Kopelman* to obtain the invention specified in claim 25, a method of providing product support for a computer-related product. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop quality product releases.

Claims 17, 30, 33, 57 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Bigus et al* U.S. Patent Number 6,192,354 (February 20, 2001 Publication Date, March 21, 1997 Filing Date) in view of *Stidolph* "Evolutionary Design of Complex Software (EDCS) Demonstration Days 1999" (January 2000).

**Regarding claim 17:**

*Bigus et al* teaches,

- (a) first and second product support intelligent agents configured to perform product support operations in connection with a computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client")
- (b) a first agent platform configured to execute on a customer computer that utilizes the computer-related product (Figs. 5-6; column 8, lines 27-34, "an agent may... an

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agents' permutations"; column 10, lines 12-35, "Servers 65 of remote...in the alternative")

- (c) a product support program resident on a product support computer used in providing product support for the computer-related product, the product support program including a second agent platform, and the product support program configured to dispatch the first product support intelligent agent to the customer computer for execution by the first. agent platform, and to initiate execution of the second product support intelligent agent by the second agent platform (column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client")

- third parties scanning intelligent agents (column 6, lines 14-22, "Domain knowledge may...for the client")

However, *Bigus et al* doesn't explicitly teach the first and second product support intelligent agents are associated with different vendors while *Stidolph* teaches

- the first and second product support intelligent agents are associated with different vendors (page 108, right column, "WebDAV: <http://www.ics.uci.edu/pub/edcs/>" section, "WebDAV is an...of distributed files")

Motivation - The portions of the claimed apparatus would have been a highly desirable feature in this art for

- Faster and cheaper software evolution (*Stidolph*, page 95, left column, "The Evolutionary Design of Complex Software (EDCS) Program" section, paragraph 2, "The ultimate vision...meet changing requirements – evolutionary systems")

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- Optimizing performance (*Bigus et al*, Abstract, "The performance of... variety of situations")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Stidolph* to obtain the invention specified in claim 17, an apparatus. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop high performance products.

**Regarding claim 30:**

*Bigus et al* teaches,

- (a) dispatching a first product support intelligent agent from a product support computer to a customer computer to execute on a first agent platform resident on the customer computer to perform a first product support operation associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may... of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote... in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary... of the client")
- (b) executing a second product support intelligent agent on a second agent platform resident on the product support computer to perform a second product support operation associated with the computer-related product (column 8, lines 27-34, "an agent may... an agents' permutations")

However, *Bigus et al* doesn't teach the first and second product support intelligent agents are associated with different vendors while *Stidolph* teaches,

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- the first and second product support intelligent agents are associated with different vendors (page 108, right column, "WebDAV: <http://www.ics.uci.edu/pub/edcs/>" section, "WebDAV is an... of distributed files")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Faster and cheaper software evolution (*Stidolph*, page 95, left column, "The Evolutionary Design of Complex Software (EDCS) Program" section, paragraph 2, "The ultimate vision... meet changing requirements – evolutionary systems")
- Optimizing performance (*Bigus et al*, Abstract, "The performance of... variety of situations")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Stidolph* to obtain the invention specified in claim 30, a method of providing product support for a computer-related product. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop high performance products.

**Regarding claim 33:**

*Bigus et al* teaches,

- (b) identifying an undesirable operational condition associated with the computer-related product from the collected operational data (column 5, lines 42-53, "agents may have... networks vs. procedural logic), etc."; column 6, lines 6-13, "domain knowledge for... sales are low")

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- (c) creating a product support intelligent agent configured to remedy the undesirable operational condition (column 6, lines 6-13, "domain knowledge for... sales are low")
- collecting operational data from a customer computer that utilizes the computer-related product during operation of the customer computer (column 8, lines 66-67, "A representative hardware... the invention is illus-"; column 9, lines 1-13, "trated in FIG. 4, where a ... and public networks (e.g., the Internet)"; column 6, lines 6-9, "domain knowledge for... inventory monitoring agent")

However, *Bigus et al* doesn't explicitly teach (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers or (d) distributing the product support intelligent agent to at least first and second customer computers from the plurality of customer computers to remedy the undesirable operational condition in the first and second customer computers while *Stidolph* teaches,

- (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers (page 99, left column, "Distributed Software Engineering:" section, "Distributed configuration and deployment of systems:" bullet, sub-bullet 2, "The Software Release Manager... interdependent software systems")
- (d) distributing the product support intelligent agent to at least first and second customer computers from the plurality of customer computers to remedy the undesirable operational condition in the first and second customer computers (page 99, left column, "Distributed Software Engineering:" section, "Distributed configuration and



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deployment of systems.” bullet, sub-bullet 1, “The Software Dock...a wide-area network”)

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Faster and cheaper software evolution (*Stidolph*, page 95, left column, “The Evolutionary Design of Complex Software (EDCS) Program” section, paragraph 2, “The ultimate vision...meet changing requirements – evolutionary systems”)
- Optimizing performance (*Bigus et al*, Abstract, “The performance of...variety of situations”)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Stidolph* to obtain the invention specified in claim 33, a method of providing product support for a computer-related product. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop high performance products.

**Regarding claim 57:**

*Bigus et al* teaches,

method comprising:

- analyzing the operational data from the customer computer using at least one intelligent agent (column 6, lines 6-13, “domain knowledge for... sales are low”; column 10, lines 12-22, “Server 65 of remote...and their clients”)
- (c) identifying as a result of the analysis an undesirable operational condition associated with the computer-related product in at least one of the customer computers

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(column 5, lines 42-53, “agents may have...networks vs. procedural logic), etc.”; column 6, lines 6-13, “domain knowledge for...sales are low”)

However, *Bigus et al* doesn't explicitly teach (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers or (b) analyzing the operational data from the plurality of customer computers using at least one intelligent agent while *Stidolph* teaches,

- (a) collecting operational data from a plurality of customer computers that utilize the computer-related product during operation of the plurality of customer computers (page 99, left column, “Distributed Software Engineering:” section, “Distributed configuration and deployment of systems:” bullet, sub-bullet 2, “The Software Release Manager...interdependent software systems”)
- (b) analyzing the operational data from the plurality of customer computers using at least one intelligent agent (page 99, right column, sub-bullet 1, “Aladdin is a...in software architectures”)

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Faster and cheaper software evolution (*Stidolph*, page 95, left column, “The Evolutionary Design of Complex Software (EDCS) Program” section, paragraph 2, “The ultimate vision...meet changing requirements – evolutionary systems”)
- Optimizing performance (*Bigus et al*, Abstract, “The performance of...variety of situations”)

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Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Stidolph* to obtain the invention specified in claim 57, a method of providing product support for a computer-related product. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop high performance products.

**Regarding claim 93:**

*Bigus et al* teaches,

- executing a first intelligent agent to perform a first task associated with remedying an undesirable operational condition associated with a customer computer that utilizes the computer-related product, wherein the first intelligent agent supplies a first component associated with the computer-related product (column 2, lines 59-65, "Intelligent agents may...of the client"; Figs. 5-6; column 10, lines 12-35, "Servers 65 of remote...in the alternative"; column 10, lines 49-59, "FIG. 7 illustrates an exemplary...of the client"; column 6, lines 14-22, "Domain knowledge may...for the client")
- (b) executing a second intelligent agent to perform a second task associated with remedying the undesirable operational condition, wherein the second intelligent agent is provided by a second vendor that supplies a second component associated with the computer-related product (column 8, lines 27-34, "an agent may...an agents' permutations")

However, *Bigus et al* doesn't explicitly teach the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product while *Stidolph* teaches,

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- (a) the first intelligent agent is provided by a first vendor that supplies a first component associated with the computer-related product (page 108, right column, "WebDAV: <http://www.ics.uci.edu/pub/edcs/>" section, "WebDAV is an...of distributed files")

Motivation - The portions of the claimed method would have been a highly desirable feature in this art for

- Faster and cheaper software evolution (*Stidolph*, page 95, left column, "The Evolutionary Design of Complex Software (EDCS) Program" section, paragraph 2, "The ultimate vision...meet changing requirements – evolutionary systems")
- Optimizing performance (*Bigus et al*, Abstract, "The performance of...variety of situations")

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to combine *Bigus et al* with *Stidolph* to obtain the invention specified in claim 93, a method of providing product support for a computer-related product. The modification would have been obvious because one of ordinary skill in the art would have been motivated to quickly develop high performance products.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- *Bigus et al*; USPGPUBN 20030084010 A1; Distribution management of intelligent agents using distribution control information

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- *Buckle et al*; USPN 6049819 A; Communications network incorporating agent oriented computing environment
- *Wygodny et al*; USPN 6282701 B1; System and method for monitoring and analyzing the execution of computer programs
- *Bigus et al*; USPN 6192354 B1; Apparatus and method for optimizing the performance of computer tasks using multiple intelligent agents having varied degrees of domain knowledge
- *Bigus et al*; USPN 6085178 A; Apparatus and method for communicating between an intelligent agent and client computer process using disguised messages
- *Chen et al*; USPN 6021437 A; Process and system for real-time monitoring of a data processing system for its administration and maintenance support in the operating phase
- *Suarez*; USPN 5790789 A; Method and architecture for the creation, control and deployment of services within a distributed computer environment
- *Wang*; USPN 5455890 A; Method for structuring an expert system utilizing one or more neural networks
- *Kopelman*; Accelerated engineering: the 3 secrets to just-in-time product development (JITPD); WESCON/94. 'Idea/Microelectronics'. Conference Record; 27-29 Sept. 1994; pp 362-367
- *Stidolph*; Evolutionary design of complex software (EDCS) demonstration days 1999; ACM SIGSOFT Software Engineering Notes; Vol. 25, Is. 1; January 2000

- *Purssell*; The product release interface: environment and concerns; Fifth Electronic Manufacturing Technology Symposium International 'Design-to-Manufacturing Transfer Cycle'; 10-12 Oct. 1988; pp 51-56
- *Manderson*; Satellite systems: How to distribute data, computing, consulting, and responsibility; Proceedings of the 17th annual ACM SIGUCCS conference on User Services; October 1989

Any inquiry concerning this communication or earlier communications from the Office should be directed to Meltin Bell whose telephone number is 703-305-0362. This Examiner can normally be reached on Mon - Fri 7:30 am - 4:30 pm.

If attempts to reach this Examiner by telephone are unsuccessful, his supervisor, Anil Khatri, can be reached on 703-305-0282. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

  
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MB /ah-h.